भारत सरकार Government of India
रेल मंत्रालय Ministry of Railways
रेलवे बोर्ड (Railway Board)

Azadi Ka Amrit Mahotsav

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No. 2005/Elect(TRS)/440/23 **New Delhi, Dated:17.02.2025**

General Managers (Elect.)
All Zonal Railways.

Sub: Summer preparedness - Electric & Diesel Locomotives.

Electric Locomotives

1.0 Instructions already exist in ACTM para No. 30514 for taking precautions before onset of summer. Railways are advised to ensure seasonal precautions instructed vide ACTM para No. 30514. Copy of relevant pages of ACTM is enclosed herewith for ready reference.

2.0 In addition to the instructions contained in ACTM, some of the other important measures to be taken for maintenance of electric and diesel locos are as under :

2.1 Ensure completion of summer precautions within 30th April 2025.

2.2 Check for any oil leakage from transformer, Tap Changer (GR), MPH circuit, traction converter, oil pump and other accessories & ensure appropriate oil levels in all these equipment between minimum and maximum levels.

2.3 Ensure topping up of water in batteries.

2.4 Prescribed type and number of fire extinguisher should be provided on each locomotive and loco crew are trained to operate these when required.

3.0 Besides above, following instructions are also to be followed by homing sheds and loco pilot working on electric locos to curb loco failure on line

3.1 Fire prevention measures for three phase locos issued by RDSO vide letter No. EL/3.1.35/2 (Elect), Dated 29.01.2013 should be implemented along with modification to provide mechanical locking arrangement in primary over current relay of 3-phase locomotives as per modification sheet No. RDS0/2013/EL/MS/0420 Rev'0', dated 23.01.13, issued by RDSO should be ensured. Compliance of RB letter No. 2008/Elect (TRS)I113/5/Pt. dated 08.12.2016 on fire prevention shall be ensured.

3.2 Ensure temperatures strips of range 40-70°C and 60-100°C pasted on DE side bearing incompliance to the comprehensive maintenance instructions advised by RDSO vide SMI No. RDSO/2013/EL/SMI/0278 (Rev.'0'), dated 24.12.2013 for fitment of traction motor (6FRA6068) Drive End bearings NU2236 used in 3-phase locos during overhauling to avoid WAP7/WAG9 locos traction motor bearing failure.

3.3 Air delivery measurement in 3-phase locos to ascertain proper cooling and pressurization of machine room advised by RDSO vide SMI No. RDSO/2009/0255 (Rev."0") dated 06.05.2009, to avoid dust ingress and proper cooling of electronic cards as a schedule activity.

3.4 Filter cleaning as per RDSO SMI No. RDSO/2016/EL/SMI/0286(REV.'0'), Dated 09.06.2016 shall be carried out.

3.5 Improvement measures to maintain pressure in the machine room and make it dust free as per RDSO guideline circulated vide letter No. EL/3.1.35/10 dated 11.04.16.

3.6 Cleaning of heat sink and filter of hotel load converters should be ensured as per RDSO's SMI No RDSO/2016 /EL/SM1/297 (Rev 1) dated 13.11.2024. Ensure redundancy in UIC for HOG operation, vide RDSO letter no EL/11.5.5/6 dated 27.06.2024

3.7 To improve the effectiveness and reliability of wiper in electric locomotives, zonal railways should follow RDSO SMI no. RDSO/2024/EL/SMI/0333 Rev'0'dated 11.12.2024

3.8 Ensure that no locomotive should turn out from the shed without a functioning cab air conditioner.

3.9 Removal of dust from machine room by industrial vacuum cleaner and plugging leak holes by rubber grommet/gasket /RTV.

3.10 Provision of roof clamp shall be ensured.

3.11 Condition of air filters and OCU gasket to be ensured

3.12 Application of conductive grease on knife switch contact of BUR.

3.13 Implementation of RDSO modification No. RDSO/2018/EL/MS/468 (Rev. "0") dated 06.02.18 for Hotel Load Converter.

3.14 Modification to avoid cab changing in case of failure of processor cards of VCU as per RDSO/CLW's guideline.

3.15 Implementation of RDSO's modification sheet no. RDSO/2018/EL/MS/0475 for switch OFF/ON of control electronics.

3.16 Any fault message in DDS should not be acknowledged without reading and follow up as suggested. Once acknowledged, the message gets lost.

3.17 Any such messages requiring train to stop, efforts should be made to clear the block section in coasting and then attention to the message can be given.

3.18 If one auxiliary converter is isolated, then as per TSD, switching OFF & ON electronics is advised once for normalizing the working of auxiliary converter. Since the isolation of auxiliary converter reduces the ventilation level, it is prudent that, in summers, switching OFF & ON of electronics should be tried again later on during stops, to normalize the working of auxiliary converter.

3.19 Priority-I message have to be immediately acted upon & course of action is also available in DDS. P-II message need not be acted immediately except for battery voltage low /MCB 100 tripped. P-I message come with a red flashing of LSFI in addition to BPFA.

3.20 Timely attention to Priority-II battery messages so that loco does not shut down with PI message later on. Tripping of battery charger MCB 100 invariably leads to Priority-II battery messages. Switching ON MCB 100 has to be done with VCB in OFF condition.

3.21 In case Angle transmitter goes defective, immediately switch over to manual mode using switch 152 in running condition. There is no need to stop.

3.22 Configuration switch 160 restricts loco speed to 15 kmph & can be corrected without switching electronics OFF/ON in much lesser time. However, the loco has to be stopped before operating switch 160.

3.23 Zonal Railways are also advised to follow the latest TSD of 3-Phase locos issued by RDSO and counsel all running staff in lobbies, training schools, on line etc. accordingly.

3.24 Review progress of latest Reliability Action Plan as issued by RDSO & also available at its website.

4.0 In addition to above, to prevent fire hazards in locomotives, thorough blow outs, cleaning of underslung power equipment, removal of spillages from engine areas and functioning of fire safety equipment may also be ensure.

Diesel Locomotives

5.0 As the summer season is approaching, Zonal Railways are also advised to ensure the following instructions to avoid fire incidences on diesel locomotives:

5.1 No leakage of Lube oil and Fuel oil.

5.2 Fuel cross over pipe is properly secured and is not rubbing with Engine block.

5.3 Engine room must be maintained oil free and no foreign material like cotton waste, etc are lying there.

5.4 The electrical cables should be adequately protected, covered from leaking diesel oil, which could spill on these cables.

5.5 Oil spillage from diesel engine in to the Alternator/Generator room to be prevented.

5.6 Leakage of oil through partition plate and leakage of oil from crank case exhauster pipe shall be checked.

5.7 IR values of power and control cables shall be checked.

5.8 To avoid sparks, wiring at junctions/interfaces should be tightened properly.

5.9 Tightness of terminals and sealing at terminal box to be checked and dust particles shall be cleaned periodically.

5.10 Carbon brush condition, brush spring pressure, freeness of carbon brush, arcing horn gap and commutator surface cleanliness shall be checked periodically.

5.11 Milli volt drop shall be checked across the WSR with traction motors in series and parallel conditions.

5.12 To prevent oil entry in to the traction alternator connection box, adequate sealing arrangement should be maintained.

5.13 It must be ensured that thermal insulation is provided on exhaust manifold and compressor intercooler pipes.

5.14 Radiator core should be cleaned periodically by blowing.

5.15 Static pressure of all Traction motor should be checked periodically and Traction motor air duct boots should be examined thoroughly and any suspect ones replaced. It should be also ensured that all the inspection covers of traction motors are tightened and sealed properly.

5.16 Prescribed type and number of fire extinguishers should be provided on each locomotive and loco crew are trained to operate these when required.

5.17 All rotating Electrical equipment like Traction Alternator, Traction Motor, Dynamic Blower Motor, radiator fan and Rectifier should be thoroughly blown out with dry compressed air.

6.0 A drive may be launched to conduct ambush checks to sensitize field maintenance & running staff & keep records of the progress made on cyclic checks. Feedback may be communicated to Board on completion of the same. The above points are not exhaustive and any other instruction, issued time to time may be incorporated in the drive to ensure safety and reliability of electric and diesel locomotives.

DA: Relevant extracts from ACTM.

Digitally signed by Vikash Anand
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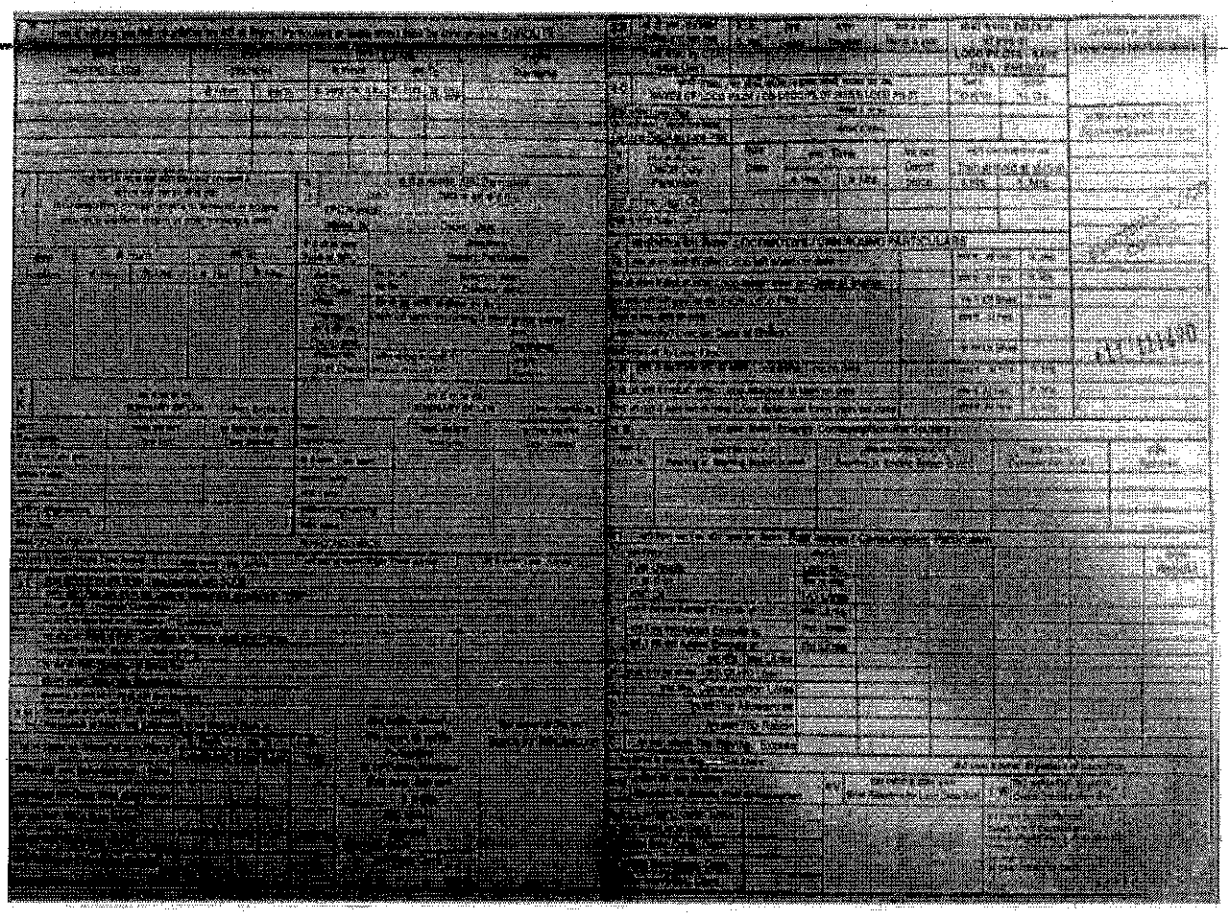

30514 Seasonal Precautions

(Railway Board Lr. No. 2005/Elect(TRS)/440/23 Dt: 24.02.2016, 11.05.2017 & 22.09.2017 and from Camtech Booklet No. CAMTECH/12-13/S&M-Precaution/1.0, August, 2012)

A few essential precautions required to be taken prior to the commencement of the monsoon, pre-summer season and pre-winter season are listed below. Local instructions may be issued to supplement these lists as required.

PRE SUMMER PRECAUTIONS FOR CONVENTIONAL AC ELECTRIC LOCOMOTIVES

1. Temperature checking of axle box, MSU and TM bearing through contact less digital temperature meter of each locomotive during shed/out pit visit. Proper record should be maintained for timely detection of any abnormality and to arrest failure of bearings on line.
2. All TMs to be checked for proper fitment of inspection covers. A cyclic check to be conducted on all locomotives for ensuring proper pressure in commutator chamber of all TMs.
3. A cyclic check should be done on all locomotives for ensuring proper cleaning of side body filters. Monitor depression inside loco by a manometer and it should not be more than 6 – 7 mm.
4. Transformer oil cooling radiator of all locomotives should be cleaned by blowing air, checked for proper cleaning and air suction through MVRH one cycle.
5. One cyclic check of SL coils cleaning and blowing to be ensured and intactness of SL covers both top and bottom properly must be ensured.
6. All relays must be provided with covers along with proper gasket to ensure dust free environment

for relay operation – one cyclic check.

7. A cyclic check to be taken in all locomotives to ensure modified oil dipstick/ cap on suspension bearing oil pump of all TMs.
8. All Trip sheds must be strictly instructed to top up suspension bearing oil up to maximum mark and for this purpose availability of oil in Trip sheds must be ensured at the level of Sr.DEE/TRS.
9. Nil oil leakage through suspension bearing must be ensured. One cyclic check to be completed by March.
10. All blowers must be checked for delivery of rated air output. In case of malfunctioning of blower relay, case should be properly investigated and working of blower properly shall be ensured.
11. Proper working of all blower relays in the locomotive must be ensured one cycle check by March.
12. RSI block Elmex and SBs at different locations must be checked for dust freeness to avoid any chances of tracking – cycle check.
13. WAG7 locos fitted with compact RSI blocks with 3 bridge design should preferably be utilized in MU formation. Similarly WAG5 locos for freight operation should work only in MU configuration.
14. SIV fan bearing should be replaced as per specified schedules. Ensure implementation of Reliability Action Plans for different manufactures of SIV.
15. Working of cab fans must be ensured in all locomotives - cycle check
16. All locos fitted with Cab-air conditioning should be in working condition.
17. All types of rubber hoses must be closely examined for their physical condition and should be changed on condition basis – cycle check.
18. SB oil pump to be opened, sump to be cleaned on all locos – cycle check.
19. Re-greasing of MVMT bearing during IC to be ensured.
20. Loco interior to be thoroughly cleaned of accumulated oil and dust - one cycle check.
21. Drivers must be alerted to feel the axle boxes as often as possible
22. There should be no leakage of grease from Axle box front cover and rear dust guard. Axle boxes should be thoroughly examined.
23. Earthing shunts should be intact.
24. Gear case half ring and half ring felt should be properly fitted - cyclic check do be done.
25. Sunvisors in both cabs should be secured. One cycle check.
26. Roof insulators should be cleaned thoroughly. One cycle.
27. Clean oil bath filters of CP & ensure proper fittings. Cyclic check.
28. Fuses with covers should be secured. Cyclic check.
29. Apply petroleum jelly on reverser contacts.
30. Cab heaters to be disconnected by providing insulating plate in fuse box.
31. Inspection covers, terminal covers and bellows of traction motors should be checked for proper fitting and tightened by providing necessary gasket.
32. Secure and properly clean Traction Motor expanded metal protective screens.
33. Transformer sealing gasket should be checked and replace if need be to avoid dust ingress.
34. No leakage of transformer oil from transformer GRMPH circuit and other accessories and proper cleaning in its vicinity. - Cyclic check.
35. Ensure transformer oil in gauge glass and oil level in tap changer not more than 20 deg.C.
36. Battery boxes should be cleaned. - One cycle.

37. Top up batteries with distilled water.
38. Petroleum jelly to be applied on battery connections.
39. There should be no leakage of compound from gear case & half ring.
40. There should be no oil leakage in the loco from CP.
41. Ensure cyclic check of cables, dressing, bunching, provision of gromets by March.
42. Check battery charger and adjust voltage / current.
43. RSI blocks should be checked & there should be no dust accumulation.
44. Secure dust proof transparent covering of Aux. Interlock assembly, RS assembly.
45. Ensure proper greasing of all TMs in IC schedule.
46. TM leads should be checked for proper cleating.
47. Proper greasing of bearings of all Aux. Motors to be done during inspection schedules.
48. Ensure that all the Aux. Terminal covers are intact.
49. Ensure no over-aged battery in service. A cyclic check to be completed.
50. Ensure availability of fire extinguisher in locos.

PRE SUMMER PRECAUTIONS FOR THREE PHASE AC ELECTRIC LOCOMOTIVES

1. Blowing of all filters during every schedule from 15th March to end of July.
2. Washing and blowing of radiators during every schedule from 15th March to end of July.
3. Reverse blowing of radiator in working condition of OCB1 and 2 in one cycle.
4. Checking and washing of MRB-1 and 2 filters by removing in every schedule from 15th March to end of July.
5. Ensure working of churning fan in CEL-1 & 2, SR-1 & 2 and BUR electronics. (Loco wise record shall be maintained).
6. There should not be any air leakage from duct joints of blowers.
7. Checking of overheating of 35 sq.mm cables and 70 sq.mm cables in HB-1 & 2 panels.
8. Checking of oil leakage in capacitors of DC link of SR- 1 & 2, BUR-1, 2 & 3 and FB panels.
9. Washing of OCB-1 & 2 filter by pressurized water until clean water delivering from filters from 15th March.
10. Check BA cables male and female contacts for any sign of flashing/overheating.
11. Ensure availability of 100% ceramic filters in batteries.
12. Clean vent plugs of Batteries. All vent plug holes should be clear.
13. Check oil leakage at following points:
    a. All flange joints of pipe, radiator, pumps, and conservators.
    b. Near SR-1 + 2 pumps
        i. At isolating cocks
        ii. At sensor joint
        iii. At bellow of pipes
        iv. At conservators
    c. All gate valves and pipes at under-frame.
    d. All pressure sensors/temperature sensors fitting points, gauge glass of SR-1 & 2, conservator 1 & 2.
14. Carry out a cyclic check on all locomotives for ensuring proper cleaning of TM blower filters.
15. Ensure Gear Case oil to ½ mark.

16. Check all blowers for delivery of rated air output.
17. Closely examine all types of rubber hoses for their physical condition and should be changed on condition basis - cycle check.
18. Thoroughly clean loco interior for accumulated dust - one cycle check.
19. Ensure securing of sun-visors in both cabs.
20. Clean filters of compressors (CP) and ensure proper fittings.
21. Check terminal covers and bellows of traction motors for proper fitting and also check bellow plates and bolts.
22. Ensure no leakage of transformer oil from transformer, converter, MPH circuit and other accessories and also ensure proper cleaning in its vicinity.
23. Ensure no oil leakage from gear case. A cyclic check shall be completed.
24. Ensure no over-aged battery in service. A cyclic check shall be completed.
25. Ensure sealing gasket of doors, windows, filters etc to avoid entry of dust inside Machine room. A cyclic check shall be completed.
26. Ensure transformer oil and SR oil in gauge glass between minimum and maximum level.
27. Check working of fire detection unit. In FDU one cycle check of potentiometer output value shall be done. Check RR section during pre testing and get it corrected from Relay section if required.
28. Ensure intactness of earthing wire connection with Traction Motor.
29. Carry out blowing of Harmonic Filter Resistance on roof.
30. Ensure proper cleaning of inter/after coolers of main compressors by compressed air.
31. Ensure cleaning of battery boxes.
32. Top up batteries with distilled water in all schedule inspections.
33. Ensure instructions contained in RDSO's letter no.EL/3.2.1/3-ph dated 30.07.09 for arresting oil leakage cases from transformers i.e.
    a. Oil leakage from Bushings and Bushing plates.
    b. Oil leakage from the Stuchi coupling & rubber hose pipe of conservator tanks. RDSO Technical circular No. ELRS/ TC/ 0076 dtd. 17.09.2002 on "Oil leakage from the transformer bushings and cover in three phase locomotives" may be referred.
34. Ensure provision of modified cooling radiators for better cooling of traction converter control electronics. (Ref: RDSO letter no. EL/11.5.5/5 dated 15.02.10).

    Refer RDSO purchase specification No. RDSO/ 2009/ EL/ SPEC/ 0100 Rev. (0) dtd Nov, 2009 for procurement of modified cooling radiator.
35. Ensure removal of interlocks of control circuit contactors No.126 from MCPA circuit (Ref: RDSO/ 2011/ EL/ MS/ 399 Rev. 0. dated 08.08.11)
36. Ensure partial blocking of opening duct of back side of auxiliary converter of three phase electric locomotives as shown in figure 1.

    Ref : RDSO MS no. RDSO/2009/ EL/ MS/ 0385 (Rev.0), Dated 15.12.2009)
37. Ensure implementation of modification sheet for shifting of the termination of 4GKW,1.8 KV, 70 mm2 cable and 2 x 2.5 mm2 cables housed in lower portion of HB-2 panel and provision of Synthetic resin bonded glass fiber (SRBGF) sheet for three phase locomotives as per MS RDSO/2011/EL/ MS/0400 Rev.'0' dated. 10.08.11.
38. Ensure implementation of modification sheet for relaying of cables in HB-2 panel of three phase locomotives to avoid fire hazards as per MS of RDSO/2011/EL/MS/0401, Rev.'0' dated 10.08.11.

39. Ensure implementation of modification sheet for auto switching of machine room/ corridor lights to avoid draining of batteries in three phase electric locomotives as per MS of RDSO/2011/EL/MS/0403,Rev.'0' dated. 30.11.11.
40. Carryout measurement of cable continuity for all four earthing brushes.
41. Ensure completion of modification for closure of two central ventilators in WAP-7 and WAG-9 locomotive in order to avoid ingress of dust, as per RDSO modification sheet No. RDSO/2009/EL/MS/0380(Rev0) dated 06.07.2009.
42. Modification in Auxiliary circuit of locomotives for isolation Air conditioner circuit, in case of earth fault in the air conditioning unit to avoid SIV tripping as per RDSO modification sheet No. RDSO/2011/EL/MS/0394 Rev'0' Dated: 09.02.2011.
43. Ensure cleaning of Oil Cooling Radiators in 3 phase electric locos, as a pre-summer activity prescribed by RDSO vide letter No. EL/3.1.35/16, dated 05.06.13.

PRE-MONSOON PRECAUTIONS FOR CONVENTIONAL AC ELECTRIC LOCOMOTIVES

1. Ensure completion of rainwater protection and pre-monsoon precaution works well before onset of monsoon.
2. Test the water-tightness of loco body including roof by means of a high pressure water jet and seal all leakage points. Water jet test facility should be as per RDSO SMI No. RDSO/2017/EL/SMI/0315 Rev '0' dt: 03.10.17. (It must be ensured that the loco is well away from live OHE to prevent the water jet coming into contact with live wires)
3. Special attention should be given to the following points and gasket for ensuring no water leakage:
   a. Loco body joints and hood joints.
   b. Joints of the mounting bases of roof equipment.
   c. Head light gaskets.
   d. Joints of look out glasses and corridor side glasses.
   e. Door gaskets.
   f. Sand box gasket and covers.
   g. Joints of marker light.
   h. Cover of multiple operation / coupler sockets.
   i. VCB cover joints.
   j. Side body filter joints with super structure.
   k. Glass shutters.
   l. Roof gasket.

   Note: After the first rain the loco should be inspected thoroughly to detect and attend to leakage points. Special attention should be paid to the above water leakage points.
4. Cleanliness of roof gutters and drain pipes and accumulation of water on the roof.
5. Roof bus bars clamps should be greased to prevent accumulation of water.
6. Check the Cab floor above sand boxes for any water leakage into the sand boxes.
7. Roof joints with super-structure-roof gasket should be in good fettle (condition).
8. Proper functioning of all eight sanders by providing sand of size between 2 microns to 20 microns should be ensured.
9. Ensure arrangements for filling good quality of sand on all crew changing points.
10. Ensure availability of register where acknowledgement of drivers is taken after filling up sand.
11. Ensure entry in log book regarding functioning of sanders and availability of sand.
12. Ensure working of sand drying plant and build up adequate stock of dry screened sand at sanding

points.

13. One cyclic overhauling of additional C-2 relay valve.
14. Proper working of wipers should be ensured.
15. Provision of head light dome and protection cap over horns and sand boxes.
16. Overhauling and Reconditioning of air drier in VCB locomotive on the basis of silica gel colour of desiccant.
17. Paraffin/ petroleum jelly should be applied to the terminals of lead acid battery.
18. Check TM inspection covers and terminal blocks cover gasket and replace them, if necessary. Apply leaguare varnish to TM terminal.
19. Check the bottom covers of the smoothing reactor for any damage, replace, if any cracking are observed.
20. Ensure proper functioning of water separation anddrain cock of the pneumatic pipe system. During monsoon, the pneumatic system should be drained more often to discharge the accumulated water.
21. Provision of RTV compound on MCP terminal box at cable entry point to restrict water entry. Ensure gasket on Terminal box cover or provide RTV.
22. Provision of RTV compound on axle box to restrict water entry in axle box. Ensure gasket on Terminal box cover or provide RTV.
23. Provision of RTV compound on SPM pulse generator (PG) to restrict water entry.
24. High flood marks 9" should be painted on the cattle guard to give the indications to the drivers of water levels over the rails.
25. The transformer oil and tap changer oil should be tested for dielectric strength in a cycle before the outset of monsoon, and filtered if BDV is less than 40 kV.
26. Dissolved Gas Analysis (DGA) of transformer oil.
27. Ensure adequacy of transformer/ GR oil levels and also ensure healthy condition of silica gel, replace if required.
28. Drain cock and sampling cock covers of transformers are to be sealed properly to avoid moisture entry.
29. Drain the compressed air pipe line manually where the automatic drain valves are removed and cocks are provided.
30. Apply a coat of anti-corrosive paint on the roof bolts while the loco comes to shed.
31. Ensure opening / closing of side window shutters.
32. Insulation resistance of vital equipment like TM, SL lying on shop floor to be improved by baking in oven, varnishing and proper covering.
33. All air dryers to be ensured in proper working order.
34. All EMU type After-Cooler to be regularly drained by drivers as well as at out pits.
35. One cycle calibration of QD relay setting for proper pickup and dropout current.
36. Ensure availability of fire extinguishers in locos.

PRE-MONSOON PRECAUTIONS FOR THREE PHASE AC ELECTRIC LOCOMOTIVES.

1. Check water leakage from machine room filter and TM blower filter joints during water tightness test.
2. Replacement of Silica gel of Converter.
3. The transformer and converter oil should be tested for dielectric strength in a cycle before the onset of monsoon, and filtered if BDV is less than 40 kV.

4. Dissolved gas analysis of transformer and converter oil.
5. Insulation resistance of vital equipment like TM, Auxiliary blowers lying on shop floor to be improved by baking in oven, varnishing and proper covering.
6. Ensure implementation of modification sheet no. RDSO/ELRS/MS/0328 (Rev.0) dtd. 29.10.2003 for provision of water discharge outlet in TM & oil Scavenge blowers.
7. Checking of Megger value of Harmonic filter Resistance and cleaning if found less.
8. Battery box covers to be made water tight.
9. Side body air filters to be cleaned and maintain dust free environment.
10. Provision of drain pipe in SCTM bottom half to drain out accumulated water.
11. Fire prevention measure issued by RDSO vide letter No. EL/3.1.35/2 (Elect), dated. 29.01.2013 for three phase locos should be implemented.

WINTER PRECAUTIONS FOR CONVENTIONAL AC ELECTRIC LOCOMOTIVES

1. During all trip inspections or roof inspections whenever carried out, proper cleaning of roof-line & pantograph insulators with a wet & dry cloth for maintaining shining surface finish to be ensured. Further, application of Silicon oil to increase the hydrophobicity of insulator porcelain surface after cleaning and rounding off work on sharp edges of roof bar connections & fittings as per instructions laid down in RDSO SMI No. RDSO/2012/EL/SMI/0274, Rev'0', dated 29.03.2012 to be ensured by homing sheds before November.
2. Ensure joint checking of loco roof equipment (including pantographs, cleaning of roof insulators and roof bars etc.) with TRD staff at sheds & trip shed as a preventive measure.
3. Also, check flashover of roof insulators and roof line fittings as per RDSO's SMI no. RDSO/2012/EL/SMI/0274 Rev '0' dated 23.03.2012.
4. Regreasing of the servomotor of pantographs.
5. Ensure that all the four cab heaters/blowers are in working order.
6. Terminal connections of cab heater cum blower assembly are to be modified as per RDSO modification no. RDSO/2011/EL/MS/0408 Rev'0', dt. 30.05.12
7. The window shutter sealing gaskets to be checked and made air tight.
8. Ensure Cab doors and corridor doors locking handles are in working order. The door sealing gaskets should be held tight in the position.
9. Cab ventilator cover sealing should be perfect.
10. Main power transformer, Traction converter and tap changer breather silica-gel condition to be checked and replaced, if necessary. Proper Oil levels in TFP, GR & Traction converter to be checked and oil tested for dielectric strength.
11. Compressor oil baths to be checked and oil replaced, if necessary. Ensure unloaders are in working order.
12. SMGR sealing gaskets to be checked to ensure that there is no air leakage.
13. SMGR servomotor cylinders to be cleaned and regreased with recommended grease.
14. Ensure that Air dryer is in working order and isolation should not be permitted.
15. Draining of moisture from all MR and free movement of drain cocks to be ensured.
16. Ensure proper function of auto drain valves and air dryers.
17. Servomotors of CTFs & reversers to be lubricated afresh.
18. TM inspection cover sealing gaskets be checked to ensure that there is no air leakage.

19. Brake cylinder adjustment to be carried out and regreasing done. Free movement of brake cylinders to be ensured. If found sluggish, then overhauling should be done.
20. Terminals of battery to be checked for sulphation, cleaned and petroleum jelly applied on the terminals.
21. Sand boxes to be checked, wet sand to be removed and dry sand to be filled. All eight sanders are to be kept in working condition. Provision of gaskets to be ensured for air tightness.

The pre-winter precautions- provision of fogpass /fogsafe devices:

Fog Safe device: Check its availability and ensure it is in working order. (Use of Fog safe device during foggy and inclement weather as per Railway Board letter no.98/safety (A&R)/19/16 Dt. 25/10/2019).

a. Instructions on train operation during foggy weather have been issued by Railway Board vide their letter referred above.
b. Fog Safe devices are in use in many zonal Railways such as NCR, NR, NER, ECR, etc and being deployed similar to walkie-talkie (VHF sets) where crew collects and deploy Device during commencement of duty and return in home lobby after completion of duty. Device being mapped to specific route, above procedure is appropriate. Same procedure to be adopted in Central Railway
c. Fog safe device is to be used in every winter season (usually spanning between November to February) and instruction have already been issued to ensure that running staff is properly trained & counselled in use of fog safe devices during foggy weather.
d. Fog safe device deployment should be similar to walkie-talkie (VHF Sets). Portable fog safe devices to be kept charged in lobbies and to be carried with by crew during train operation in foggy weather.
e. In this context, it is advised to ensure that adequate nos. of fog safe devices are available and in working condition for providing same to crew along with necessary arrangement for their charging, upkeep and operation.
f. Fog safe device is not failsafe device therefore it should be used as an assisting equipment only. Crew should work as per G&SR and instructions issued time to time.
g. LIs should monitor functioning of fog safe devices. If any correction is required for mapping it should be done on priority.

30514A DUTIES OF LOCO PILOT IN CASE OF CATTLE RUN OVER

When a Loco Pilot observes cattle on his track and according to opinion of Loco pilot the train's increased speed can result in cattle run over then Loco pilot shall control the speed of train by applying A 9 brake valve accordingly. Even after this cattle run over happens then Loco Pilot should stop the train and take the following actions to avoid the possible damages:

1. On the Flasher Light
2. Stop the train immediately
3. In case of any hindrance on the tracks remove it with the help of Railway Official and volunteers
4. Loco Pilot must inspect the Safety fittings of the engine and some side coaches for any damages or abnormalities caused due to run over.
5. In case of any damages or abnormalities seen, Loco Pilot must Report it to TLC and also mention the same in Loco Log Book.